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IN THE

Supreme Court of the United States

OCTOBER TERM, 1934.

No. 254.

PARAMOUNT PUBLIX CORPORATION,
Petitioner,

vs.

AMERICAN TRI-ERGON CORPORATION,
Respondent.

BRIEF FOR PETITIONER

OPINIONS BELOW

The opinion of the District Court (R. 1173) is reported in 4 Fed. Supp. 462. The opinion of the Circuit Court of Appeals (R. 1225) is reported in 71 Fed. (2d) 153. Judge Swan dissented, but wrote no opinion.

JURISDICTION

The judgment of the Circuit Court of Appeals was entered June 11, 1934 (R. 1233). The petition for certiorari was filed August 6, 1934, and granted November 5, 1934. The jurisdiction of this Court rests on Section 240(a) of the Judicial Code as amended by the Act of February 13, 1925, c. 229, 43 Stats. 938; U. S. C. A., Title 28, Sec. 347.

QUESTION PRESENTED

This is a patent infringement suit. Claim 5 of the patent, said to be typical, is as follows:

> "A process for producing a combined sound and picture positive film, for talking moving pictures, comprising, photographing a sequence of pictures on one length of film, and simultaneously photographing on another length of film a corresponding sequence of sounds accompanying the action, separately developing the two negatives in a manner appropriate for each, and printing the sound and picture negatives respectively upon different longitudinally extending portions of the same sensitized film, to form the sound sequence at one side of and along the picture sequence" (R. 469).

The primary purpose of the process, stated in the specification, was the separate development of the picture and sound negatives in a manner appropriate for each. The process involved three steps:

> (a) Photographing the picture and sound on separate lengths of film, or accomplishing the same result by recording on a single film to be split longitudinally before development;
>
> (b) Separately developing the two negatives;
>
> (c) Uniting them by printing side by side on a single positive film.

No questions of infringement or utility are involved.

The principal question is whether, in view of the prior art, there was any invention.

The petitioner contends that the steps of the process were separately and collectively old, that the

advantages of each step were previously known, and that the decision of the Circuit Court of Appeals runs counter to the decisions of this Court upon the question of invention, including those which hold that the application of an old process to a new subject matter is not invention.

STATEMENT

Despite the size of the record this case is a simple one. The suit was brought by the respondent, American Tri-Ergon Corporation, against the petitioner, Paramount Publix Corporation, for infringement of patent 1,825,598, granted September 29, 1931, on an application filed March 29, 1922, by three Germans, Vogt, Engl and Massolle. The respondent is a patent holding company, organized in 1928, and which, as far as the record shows, has taken no part in the motion picture industry, either by production of motion pictures, furnishing of equipment or granting of licenses. The petitioner is a producer of motion pictures, and the defense of this suit has been conducted on its behalf by Electrical Research Products, Inc., a subsidiary of the Western Electric Company (R. 103).

The District Court held the patent void. It held that the steps in the patented process were separately and collectively old (R. 1183), and that "the patentees made no contribution to the art of photography" (R. 1196).

The Circuit Court of Appeals (Judge Swan dissenting) reversed the District Court and held the patent valid.

Several methods have been used for recording and reproducing sound with motion pictures. One is the disc system, by which the sound is recorded on and reproduced from discs by the use of a stylus or needle. Another is the photographic film system, by

which the sound is photographed on and reproduced from film. The film system used by the petitioner, is known as the "variable density method". The sound waves reaching a microphone are converted into electric currents which, after being amplified, cause vibrations in two metal threads placed to form a narrow slit about 1/1000 of an inch wide, called a "light valve" (R. 29, 1000), the vibrations of which correspond to the frequency and intensity of the sound waves (R. 29). Through this slit light is passed on to a moving-strip of film, on which is thus photographed a record of the variations in the light passing through the slit between the metal threads (R. 316, 1000). When this record is developed and a positive print made, it has the appearance of a ladder of parallel lines of varying density (shown on the right edge of the illustration from the Ries patent copied in the appendix hereof on page 47). In the reproduction of the sound the film is run through an apparatus in which a line of light passes through the film on to a photoelectric cell, in which electric currents are thus excited, which are amplified, and through loud speakers reproduce the sound (R. 326, 1001).

THE PATENT IN SUIT

The title of the patent is "Process for producing combined sound and picture films".

Each of the claims in suit (R. 469) (Claims 5, 6, 7, 8, 9 and 11) is for a photographic process only. The specification for the patent states:

> "In the production of speaking films it is of great advantage especially from the point of view of use, to arrange the sound sequence and the picture sequence upon one and the same piece of material (film).
>
> In this procedure, however, there frequently

occur in consequence of the changing lighting conditions in the cinematographing process, changes in the degree of exposure of the silver bromide coating, and this causes the picture sequence to be either overexposed or underexposed.

As the same film, however, carries close to the picture sequence the normally exposed sound sequence, these difficulties resulting from differences in exposure cannot be remedied in the case of combined negatives, by developing practices such as by weakening, strengthening and so forth. They can only be remedied by subjecting the underexposed or the overexposed portions of the negative to separate appropriate treatments.

Technically, this treatment is practically impossible so long as the two sequences—picture and sound—are photographed upon the same film strip.

According to the present invention the difficulty is overcome by either employing entirely separate films for the simultaneous photographing of the sound and picture negatives, or films which are connected during the photographing, but which are separated from one another before the developing, then separately developing the negatives if and in the manner required to remedy the difficulties, and then printing both sequences—picture and sound—on the different portions of the same positive film.

The synchronism is assured in both cases by the perforations and/or by corresponding marks. The production of the combined positive film can take place by copying the two negative films—sound and picture—preferably consecutively upon the same positive film" (R. 468, ll. 4-50).

This states the whole of the supposed problem and of the solution suggested by the specification. The patented process involves three steps:

> (a) Simultaneously photographing the sound and picture negatives so as to allow separate development either by photographing the sound and picture on separate films, or by photographing them on one film and splitting it longitudinally before development;
>
> (b) Separate development of the sound and picture negatives in a manner appropriate for each;
>
> (c) Preparing a single positive film containing both sound and picture by printing the two negatives either in one operation or successively side by side on a single strip of positive film.

It aids in understanding what the patented process is, to know what it is not.

The patentees assume that the method of recording sound on and reproducing it from film was old (as it was), and offer no contribution to that art.

They do not claim to be the first to point out the advantage of separate development and assume that to be well known, as it was.

They offer no contribution whatever to the method of development either with respect to emulsions or developers or machines. They merely describe the steps by which the negative records may be separated or kept separate through the developing process.

When it comes to the last step, printing the two developed negatives on a single positive, they do not claim to be the first to point out the advantages of a single positive containing both records. The single positive containing both was old.

The patentees merely refer in their specification to the fact that:

> "it is of great advantage, especially from the point of view of use, to arrange the sound sequence and the picture sequence upon one and the same piece of material" (R. 468, ll. 4-8).

That final step, printing on a single positive film, is not aimed at quality. The advantage of the single film positive for projection is convenience in use (R. 380-1).

Neither do the patentees suggest any method or machine or apparatus by which the two negatives may be simultaneously or successively printed on the same side of a single positive film. They assume, as the fact was, that such methods and machines were known and available.* As an alternative method of printing, the patentees in their specification say:

> "One can, however, previous to the printing, unite longitudinally together the two developed negative films, and then copy this so united negative in *the usual manner*" (R. 468, ll. 79-82). (Italics ours.)

---

* The illusion of motion in pictures is produced by recording and projecting a rapid succession of still pictures of a moving object. It results that the picture film has an intermittent motion. In recording and reproducing sound, the motion of the film is continuous. The positive film passing first through the picture head or projector, then passes on into the sound head or reproducer, the section of the sound record in the sound head corresponding with the pictures then in the picture head. Therefore, in printing the pictures and sound record on a single positive film the sound record is advanced to a point on the film beyond the picture it accompanies.

It is a fact conceded by both parties and both courts below that the method of recording the sound and pictures alongside each other on a single strip of negative film, developing them together and printing this negative on a single positive strip was old. It was likewise conceded that the method of recording the sound and pictures on separate strips of film, of separately developing them in a manner appropriate for each and of separately printing them on two separate strips of positive film, was old (R. 81-2). It was also conceded that the advantages of separate development of the negatives of sound and pictures were known and old, and that the advantages in use of a single positive film were known and old.

The patentees had one very simple purpose, namely, to give separate developments to the sound and picture negatives and still finish up with the old single positive for exhibition, because of its obvious and well known convenience in use.

PRIOR KNOWLEDGE AND PRACTICES

An early example of the single positive film containing the sound and the pictures side by side is the Haines British patent 18,057 of 1906 (R. 1074), which discloses sound and pictures simultaneously recorded on the same negative, which, after development was printed on to a single strip of positive film (R. 1086; Figure 2).

Similar films are shown in the Ries patent applied for in 1913 (R. 593), and in the French patent to MacCarty of 1912 (R. 928). MacCarty recites the mechanical advantages in having sound and picture records on a single film for projection (R. 932).

The patent to Walker, applied for September 2, 1913 (R. 857), covers apparatus, including a camera,

simultaneously to record pictures and sound on a single film. He provides apparatus for *successively* printing pictures and sound on a single positive from a single negative strip of film on which both sound and picture sequences are recorded. His reason for successive printing was to enlarge the sound record in printing to improve the quality of the sound reproduction. It will be noted that his process of *successively* printing sound and pictures from a single negative on to a single positive differed in no respect *as a process* or in the apparatus required, from printing *separate* negatives of sound and pictures *successively* on a single positive strip.

The photographic printing* of two separately developed negatives on one positive film, which is the last step of the process in the patent in suit, is old in photographic practice, and is termed "composite" or "combination" printing. The head of the Physical Research Laboratory of the Eastman Kodak Company, an eminent authority in this field, testified as follows:

> "Q103. Does the process of the patent in suit involve any photographic operations which are not involved in the ordinary art of composite printing, and if it does involve some additional operations, tell us what they are? A. It involves nothing other than that known in the art of composite printing.
>
> Q104. How about in composite printing using and *subjecting the two negatives to different lengths of development?* Was that done or was it not done? A. Very common.

---

* Photographic printing of separate sound and picture negatives on a single positive film is illustrated on page 48 of the appendix of this brief.

Q105. Did you do that composite printing yourself prior to April, 1921? A. Yes, I have often made prints, printing in clouds into landscapes without the clouds and other types of composite printing. It was commonly used in pictorial photography.

Q106. How early did you do that? How far back did you do that work yourself? A. Oh, I imagine about in 1900.

Q107. And the Eastman Company, did it have any experience, so far as you know, with composite printing prior to April, 1921? A. Well, of course, the art and practice of composite printing has been so general that the Kodak Company has made materials which have been used for that purpose, in many cases special materials for the practice of combination printing.

Q108. Now, will you state the steps involved in making composite prints such as you did them prior to 1921, and such as Eastman did them prior to 1921, beginning with the making of the separate records? A. Well, two or more negatives are exposed, either on the same or different objects. *These exposed negative materials are then developed separately in such a way as to give images of the character required for the subsequent operation of making the combination print. These are then printed together on a single piece of photographic material.* They may be either adjacent, juxta-posed, or superposed, in register, on the same face or on opposite faces, as the case may be. There are any number of possibilities of combining the negatives in making combination printings" (R. 166-7).

This was such common practice among photographers that it was described in the standard photo-

graphic dictionaries published both here and abroad in 1894, 1896, 1906 and 1912 (R. 161-6).

The earlier examples of composite printing related, of course, to still pictures. In the dictionary published in 1896, it is stated (R. 161):

> "Combination Printing: A method of printing in which the whole or portions of two or more negatives are combined."

In the dictionary of 1906, it is stated (R. 166):

> "it will often be necessary to develop one or (the) other of the individual exposures somewhat longer, or harder, or possibly softer. Such individual treatment of each exposure is obviously impossible, where all three exposures are made on one plate."

The trial court found (R. 1199) that, as early as 1908, it was common in the motion picture industry to take two series of pictures, each on a separate negative film, develop them separately, and print them on the same side of a single positive film (R. 128-134). The Biograph Company made and released in 1908 a motion picture known as the "Music Master" (R. 844), in which two separate scenes were taken on separate films, one of a man dreaming, and the other the scene of his dream (R. 131). These were separately developed and then printed on the same side of a single positive (R. 131-2), the picture of the dreaming man occupying one part of the film and the dream picture another.

In the Appendix (p. 49) we have placed copies of Petitioner's Physical Exhibits A and C, consisting of three films, two negatives and the positive printed from them. The originals of the two negatives are

those from which a moving picture was made by the Biograph Company and released in 1908 (see that Company's printed circular, dated May 6, 1908, R. 844). The negative at the left is of the "Music Master"; the negative in the center contains the Master's Dream. Those two negatives were separately developed (R. 131) and then the two were consecutively printed on the positive film at the right (R. 131-2).

For convenient comparison of this practice of the Biograph Company with petitioner's process and also the process of the patent in suit, we have placed on the same page in the Appendix copies of the films which compose Respondent's Physical Exhibit 12-A. These films illustrate the process of the patent in suit and also petitioner's process held to infringe. The film at the left is the negative of the moving scene. The film in the center is the negative of the sound, and the positive film at the right is the print of the two negatives together on one film.

The Rossi British patent of 1909 (R. 882) contains in Figure 1 a negative motion picture film with photographs in the upper half only; in Figure 2 another negative film with photographs on its lower half only; and Figure 3 shows the positive film printed by means of the two preceding negative films (R. 888, ll. 23-4), so that two separate series of motion pictures were recorded on separate films, developed while separate and then printed side by side on a single positive film.

The Messter patent, applied for March 25, 1914 (R. 873), shows two series of motion pictures simultaneously recorded (R. 874, ll. 64-7), developed while separate and then printed side by side on the same side of a single strip of positive film (R. 874, ll. 77-82). The object of Messter's invention was to substitute

motion pictures of an orchestra conductor for the real thing, recording on one negative a face view of the conductor in action and on another negative film a rear view, which after development were combined in printing, as above stated and projected so that the audience saw one picture and the orchestra the other (R. 874, ll. 9-22). While his product had no commercial value, he had no difficulty with the photographic process of separate recording, separate development and printing on a single positive.

The patent to Bullis of 1920, applied for in 1915 (R. 716), is for talking-picture apparatus. He states that the object of his invention is to provide apparatus:

> "whereby the picture record and sound record can be given the necessary individual treatment for developing them in the most effective manner and then readily assembled in such a manner as to bring the picture record and sound record in proper position to produce perfect synchronism when the pictures and sound are reproduced.
>
> "Further objects of the invention are to provide a device of this character which is comparatively simple and inexpensive in its construction, which admits of different emulsions and different treatments being employed in making the picture record and sound record, which provides corresponding identification marks upon the picture record and sound record so that there will be no difficulty in assembling the two records in the proper relation for the reproducing operation, which admits of the picture record and sound record being handled separately while being developed and subsequently joined together so as to produce a single film if such is desired, and which

provides for reproducing the sound from a continuously moving portion of the film and the reproduction of the picture by an intermittently moving portion of the film" (R. 716; ll. 17-47).

The use of his apparatus involves simultaneous recording of sound and pictures on separate films (R. 716, ll. 99-102) and their separate development (R. 716, ll. 19-27). Bullis carried his separate treatment of the two records to the point of providing for separate development of the positives, so that the sound and picture records were kept separate past the printing operation (R. 719, ll. 90-100). He suggests uniting the two positive prints by cementing them together (R. 719, ll. 60-62, 97). He discloses all that the patent in suit does past the point of separate development of the negatives. The respect in which the patent in suit varies from the process Bullis disclosed is in the final step, printing the two negatives on a single positive, where Bullis printed the positives on separate films and united them mechanically.

Craig's patent of 1918 (R. 861), discloses a system of simultaneously recording pictures and sound (R. 866, ll. 123-7) on separate negatives (R. 867, ll. 113-7) and after separate development printing the picture negative on one side of the strip of positive film and the sound record on the other side of the same positive strip, there being emulsions on both sides (R. 867, ll. 117-120). The sound and picture positives were superimposed though on opposite sides of the positive film. For projection Craig used two different kinds of light, one for the pictures, which the sound emulsion did not interfere with, and the other for the sound, which the picture emulsion did not interfere with. His objects were to retain the use of a standard width of positive film for which ex-

isting apparatus was built, and not to reduce the size of the picture, as would be necessary to make room for sound on the same side of the film. The respondent claimed his plan was inoperative. The Eastman Kodak expert said to the contrary (R. 269 *et seq.*). It is reasonably obvious that the complications of Craig's method were such as to be more objectionable than the disadvantages of placing sound and picture sequences on the same side and on different parts of the positive. So far as the photographic process of printing is concerned, he discloses simultaneously recording sound and pictures on separate negatives, separate development, and printing of the separate negatives on a single positive, although on opposite sides. His disclosure also included making two simultaneous sound records with the pictures, taking the sound from different locations, developing each sound record and the picture record separately and then printing the pictures on one side of a single positive strip and the two sound records side by side on the other face of the single positive film (R. 865, ll. 111-113; 866, ll. 110-122; 870, ll. 57-68).

The patent to Greensfelder of 1918 (R. 701), discloses a method of separately photographing a picture on one negative and a sound record on another, developing them while separate and then printing the two negatives side by side on the same side of a double width strip of film (R. 703, fig. 5). Greenfelder's sounds were not the actual sounds accompanying the action, but manufactured after the picture was taken, to illustrate it, and the sound marks on the negative were of a different type than is now used for reproduction of the actual sounds accompanying the scene. Except for the fact that his pictures and sound were

not simultaneously recorded, the photographic process is substantially identical with that of the patent in suit. He says:

> "A developed negative containing the rows of 'sound marks', but on which the spaces for the pictures are blank, is superimposed upon a developed negative properly pieced and joined and having the pictures photographed thereon but having spaces for the 'sound marks' left blank, and a print is made from this combined negative which will give a positive containing the pictures 4 and the corresponding rows of 'sound marks' 3, shown in Fig. 3" (R. 707, l. 128 to p. 708, l. 8).
>
> "A convenient way to obtain the film 40 is to first photograph a negative of the original film and place it side by side with a finished and pieced negative of the corresponding picture film, then from the two, print a one piece double width positive, such as shown in Fig. 5" (R. 709, l. 128).

It will be noted the patent in suit is not limited to any particular form of sound record.

The British patent to Downing of 1913 (R. 896), discloses the method and apparatus for producing motion pictures accompanied on the screen by a projection of a printed record of the words being used by the actors. His method was to make one negative of the pictures and simultaneously a phonograph record of the words used by the actors. From this a typewritten record of the words was then made and photographed on to a second negative film strip. The two separate negatives, after development, were then printed side by side on the same side of a single positive film (R. 899, ll. 29-30, 41). The words accom-

panying the action were thereby reproduced to the eye on the screen instead of to the ear by a loud speaker.

The situation respecting the prior art was well summed up by the trial court, as follows:

> "It was everyday practice in the motion picture industry, as early as 1908, to print on standard positive film composite pictures from separately developed negatives" (R. 1199).
>
> "The patent in suit is entitled 'Process for Producing Combined Sound and Picture Films'. It is merely an example of composite or combination printing, a term applied to the making on a single piece of photographic sensitive material prints or impressions from two or more separate negatives, which is very old.
>
> "No photographic operation is involved which was not employed in the old art of composite printing which involved both simultaneous and consecutive exposure of separate negatives, separate development of those negatives in an appropriate manner and with different lengths of development, and both simultaneous and consecutive printing of the separate negatives on a single positive film; and was used in both black and white and color photography, and in both still and motion pictures, long before any date important here" (R. 1195, 1196).
>
> "The composite printing process of the patent in suit for sound pictures was adopted as the need arose * * *" (R. 1196).

To avoid encumbering the brief at this point, a history of the patent in suit and its progress in the Patent Office is set forth in the appendix hereof at page 43. Some additional facts respecting the commercial use of the process are stated in connection with the argument at pages 34-41 hereof.

SPECIFICATION OF ERRORS

The Circuit Court of Appeals erred:

(1) In reversing the decree of the District Court and in holding the patent valid;

(2) In failing to hold the patent invalid because of anticipation and because of want of invention;

(3) In adopting a lower standard of invention than that laid down in the decisions of this Court, and in overlooking the rule that the application of old processes to new but analogous subject-matter is not invention;

(4) In holding on the facts of this case that commercial use sustains the claim of invention;

(5) In failing to hold claims 8 and 9 of the patent in suit invalid as being for a broader and different alleged invention than that of the application as filed.

(6) In failing to hold that the disclaimer relating to claims 6 and 7 is invalid and that the claims to which it relates are void.

SUMMARY OF ARGUMENT

I. The decisions of this Court make it clear that the patent in suit discloses nothing amounting to invention. The claims are for a photographic process of three steps, (a) photographing pictures and sound simultaneously on separate films (or if one negative is used, splitting it before development); (b) developing them separately in a manner appropriate for each; (c) uniting the two records by printing them side by side on a single positive film.

The purpose of separate development is improved quality of reproduction. The object of union on a single positive is convenience in use.

The patentees did not claim to be the first to point out the advantages or results of any step in the process.

They contributed nothing to the methods of recording sound on film, nor to the methods of development, nor to the methods or apparatus for printing two negatives on one positive film.

Photographing sound and pictures side by side on one film, developing them together and printing them on one positive, were admittedly old. Photographing sound and pictures on separate films, developing separately and printing on separate positive films, were admittedly old.

Recording pictures and sound on separate negatives with separate development and printing the two records side by side on a single positive film, where the photographic sound record was of a different type than has been commercially used, were admittedly old.

Composite printing of two motion pictures, *i. e.*, photographing two series of pictures on separate films, developing separately and printing the two side by side on a single positive film, was old.

The patentees' claim to invention narrows to the contention that they were the first, when dealing with sound pictures, to give separate developments to sound and picture negatives and still finish up with the old single positive film for exhibition purposes.

Under the decisions of this Court the patentees disclosed no exercise of the inventive faculty nor anything more than ordinary skill in the use of known photographic processes. The advantages of these steps were known and old, and the processes were separately and collectively old.

Furthermore, it being undisputed that similar steps (with identical advantages and effects) in treatment of two series of motion pictures were old, the application of the same process to photographs of pictures and sound, was the application of an old process to an analogous subject-matter, and under established legal rules was not invention. The process itself possessed no novelty. Indeed, there was really no difference in subject-matter, as the sound record is itself a photograph.

II. The Court of Appeals erred in holding that an application by an employee of the company defending the suit, for a patent on a like process, estopped the petitioner to question validity of the patent. This point was settled to the contrary by this Court in *Haughey* v. *Lee*, 151 U. S. 282, which the court below overlooked. This error may have contributed to the result reached by the court below.

III. Another error of the court below contributed to its decision. One of the patentees came to this country in December, 1926 and in 1927 made demonstrations of their apparatus, which representatives of Western Electric observed. In 1928 Western Electric manufactured sound on film apparatus. The respondent asserted and the Circuit Court of Appeals evidently believed, that the reason Western Electric did not earlier commercialize sound on film was its ignorance of this process and inability to solve the problem of uniting two separately developed negatives on a single positive by printing, and that the solution was revealed to them by the patentees in 1927. This is refuted in three ways:

First. The assertion that difficulty with these simple photographic steps caused the

Company's delay in commercializing sound on film is, in view of the prior art and practices, unbelievable on its face.

Second. The respondent refuted its own contention by proving that in April 1924, an employee of Western Electric made a patent application disclosing complete knowledge of this process. This was three years before the patentee came to the United States, and two years before Western Electric first supplied disc recording apparatus to a motion picture producer.

Third. There is abundant other evidence that Western Electric was prepared as early as 1926 to furnish equipment for sound on film, that there was no real demand for it until after the motion picture industry was convinced by Warner Brothers' 1927 demonstration that the public wanted sound with pictures, that in 1928 the other large producers chose the film system because of convenience in use, notwithstanding the expensive changes in recording and projecting apparatus, required for film, and that Western Electric supplied film apparatus as soon as demand for it arose.

In this connection, contrary to the decisions of this Court, the court below relied on commercial success to establish invention (not utility), when the prior art failed to leave the question of invention in doubt.

The method used by the court below in testing the patent in suit by reference to the prior art, was faulty in that it was limited to a search for some prior patent which, taken alone, read literally in every particular on the patent in suit, thus disregarding the question of invention over the prior art.

IV. Claims 8 and 9, omitting separate development, and filed nine years after the application, are invalid for the additional reason that they are for a broader alleged invention than that disclosed in the application, and clearly anticipated.

ARGUMENT

I.

Applying the principles laid down in the decisions of this Court to the facts of this case, it is obvious that the patent in suit discloses nothing amounting to invention.

This Court has repeatedly held that to be valid a patent must disclose a substantial exercise of the inventive faculty, and that the mere application to known elements of ordinary mechanical skill in the course of the natural development and expansion of the art is not invention. *Hollister* v. *Benedict Mfg. Co.*, 113 U. S. 59, 72, 73; *Aron* v. *Manhattan Ry. Co.*, 132 U. S. 84, 90; *Grinnell Washing Machine Co.* v. *Johnson Co.*, 247 U. S. 426, 434; *Concrete Appliances Co.* v. *Gomery*, 269 U. S. 177, 180, 185; *Powers-Kennedy Contracting Corp.* v. *Concrete Mixing & Conveying Co.*, 282 U. S. 175, 185; *Saranac Machine Corp.* v. *Wirebounds Patent Co.*, 282 U. S. 704, 713; *DeForest Radio Co.* v. *General Electric Co.*, 283 U. S. 664, 685.

No patent can be valid if the thing disclosed involves nothing more than intelligent acceptance of known expedients for accomplishing the desired thing. This Court has repeatedly held that there must be a real exercise of inventive faculties. The latest decision on this point is that of *DeForest Radio Co.*

v. *General Electric Co.*, 283 U. S. 664, where the Court held the Langmuir patent for the high vacuum tube invalid for want of patentable invention, because the principle of relationship of the degree of vacuum in the tube to ionization therein was already known. In that case and in many of the cases above cited this Court refused to dignify as invention advances in the art produced by mechanical ingenuity and technical skill of a very much higher order than these patentees applied.

The patent in suit deals merely with a photographic process (a) the simultaneous recording of pictures and sound on separate negatives; (b) the separate development appropriate to each; and (c) combining the two records on a single positive film for projection, by printing the two negatives either together or successively side by side on the same positive film.

Everything down to the point of uniting the two negatives in the printing process was disclosed by Bullis in his application in 1915. The advantages of separate development of the two negatives were known. How superficial was the patentees' knowledge of this subject is revealed in their specification, which mentions only over and under-exposure in the picture as a reason for separate treatment in development. With modern methods of measuring the intensity of light during the operation of the camera, over and under-exposure is a minor consideration in motion picture photography (R. 148-9). Bullis previously referred to a better reason for separate treatment resulting from the use of different emulsions for pictures and sound, which is a common practice today and used by petitioner, to obtain a sharper definition in the sound record (R. 145-6; 155-6).

Vogt and his associates did not claim to have been the first to point out the advantages of separate development. They made no contribution to the photographic art as to the manner of development or separate treatment.

In respect of the last step, the printing of the two negatives on a single positive, they did not claim to be the first to point out the advantages of a single film containing both sound and picture sequences. Such films were old and the advantage, convenience in use, was obvious.

The patentees did not claim to have pointed out any method, apparatus or means of printing the two negatives on a single positive, either together or successively. They left that to the known art, assuming that the method was well known and machines were available.

Their claim now is that they were the first to suggest that after sound and pictures were separately recorded and separately developed, the known advantages of a single film for projection should be obtained, by using the composite printing process and photographically printing the two negatives on a single positive (R. 80-83).

Given separate simultaneous recording of sound and pictures on separate negatives, and separate development, which were old, and given also the known mechanical advantage of having the two positives on a single strip of film, and given also the old and well-known photographic printing process common to both still and motion pictures of printing two negatives side by side on a single positive, what exercise of the inventive faculty is there in the suggestion that the two separately developed sound and picture films be combined on a single positive by this well-known printing process?

Any photographer would say "print both negatives on a single positive film".

The respondent contends that where pictures and sound had been dealt with in the prior art, there had been either a single negative containing the two records, developed together and printed on the same positive film strip, or two negatives on separate films, kept separate and separately printed on two positive film strips, and that, starting with two negatives and ending up with one positive film strip, was new. Even if this were true, it would not be invention in the light of known and disclosed methods and processes.

There is another aspect of the question of invention. Whatever may have been the prior disclosures respecting sound and pictures, it is indisputably established that the prior art disclosed recording of two sets of motion pictures either of different or identical objects on separate negative films, separately developed and then for convenience in projection printed simultaneously or successively side by side on a single strip of positive. Illustrations of this are found in the Rossi patent (R. 882); the Messter patent (R. 873) which included simultaneous recording; and the Biograph picture "Music Master" (R. 844). Every step of the process in suit is there disclosed. Although Rossi, Messter, Greensfelder and Downing do not state that the two negatives are separately developed, it is a necessary inference from the fact that they were separate during development, and because of the rack and tank method then in use (R. 149). The respondent contends that in the instances cited two picture records were being dealt with, while here a picture and a sound record are being dealt with, and seeks to distinguish the cases on that ground.

Again, in the Downing prior patent (R. 896) the motion pictures were photographed on one film strip

and simultaneously a typewritten record of the actors' words was made, and that typewritten record was then photographed on to a second negative film strip and the two negative films, after development, were printed on one side of a single positive film, so that when projected the words used by the actors were shown on the screen, with the pictures they related to. Here again the respondent says we are dealing with a different subject-matter.

In all those cases the process is identical with that in the patent in suit, the reasons for its use are alike and the subject matter is the same. The respondent overlooks the fact that the sound record is itself a photograph and is so described in the patent. True it is not for visible reproduction, but it is none the less a photograph. With the light valve system we have described (pp. 3-4) the sound record is a photograph of the variations of light passing through a varying aperture between two metal threads. As only photographic processes are involved, when dealing with photographic sound and picture records, the subject matter is not intrinsically different from two pictures. But even if it may properly be said they are different subject matters, they are closely analogous.

This Court has said that to sustain a process patent *the process itself* must possess novelty, and that the application of an old process to a different and analogous subject, is not invention.

In *Brown* v. *Piper*, 91 U. S. 37, the patent in suit was for a process of preserving fish. Referring to a prior patent, this Court said (p. 41):

> "Here" (in the prior patent) "was the application of the requisite degree of cold exactly in the manner called for in the specification of the appellee.

> This is hardly denied; but it is insisted that the process was never applied by the witness to the preservation of fish and meats.
>
> The answer is, that this was simply the application by the patentee of an old process to a new subject, without any exercise of the inventive faculty, and without the development of any idea which can be deemed new or original in the sense of the patent law. The thing was within the circle of what was well known before, and belonged to the public. No one could lawfully appropriate it to himself, and exclude others from using it in any usual way for any purpose to which it may be desired to apply it."

And, in *Penn. Railroad* v. *Locomotive Truck Co.*, 110 U. S. 490, where the patent in suit was for trucks for railway cars, this Court said (p. 494):

> "It is settled by many decisions of this court, which it is unnecessary to quote from or refer to in detail, that the application of an old process or machine to a similar or analogous subject, with no change in the manner of application, and no result substantially distinct in its nature, will not sustain a patent, even if the new form of result has not before been contemplated."

The decision in *Dreyfus* v. *Searle,* 124 U. S. 60, 63, is to the same effect. And, in *Concrete Appliances Co.* v. *Gomery,* 269 U. S. 177, 184, 185, this Court recently held:

> "Failure to make use of these obviously applicable *methods* and appliances in combination, suitable to the particular work in hand, in dealing with a new plastic material capable of

> similar treatment, would, we think, have evidenced a want of ordinary mechanical skill and of familiarity with construction problems and *methods.*" (Italics ours.)

The limitation of the patent in suit to simultaneous recording is unimportant.*

The Circuit Court of Appeals committed a fundamental error in giving controlling weight to the evidence showing the wide-spread use of the patented process as establishing *invention.* Only when invention is in doubt may commercial use be thrown in the scale to support it. *DeForest Radio Co.* v. *General Electric Co.*, 283 U. S. 664, 685.

Another error in the method followed by the Court of Appeals was to limit itself to a precise comparison

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* Our references to prior patents and practices disclose some instances where photographing two pictures, or sound and pictures, was *simultaneous*, and some where it was not. We think this is of little consequence. The limitation of the claims of the patent in suit to *simultaneous* recording of sound and pictures has no significance on the question of invention. If invention would not have been present if the claims had applied both to negatives made simultaneously and those which were not, invention was not produced by excluding the latter. All advantages of separate development of the two negatives, and of union on a single positive, and all reasons for both steps are present where recording is not simultaneous, and the ways in which those things are done is the same in either case. The original application made no mention of simultaneous recording. The later insertion of that qualifying adjective may have limited the scope of the claims, but added nothing to the argument for invention, and therefore did not make irrelevant the citation of prior patents where photographing two pictures, or sound and pictures, was not simultaneous.

of the patent in suit with prior patents, and finding that they did not literally read alike in every particular, to reject the prior patents as failing to anticipate. It also labeled the prior patents as "paper patents". The value of the prior patents consists mainly in their published disclosures of the photographic steps covered by the patent in suit. Many of the prior patents were apparatus, not process patents, but they nevertheless disclosed or assumed, as part of the knowledge in the art, the steps in photographing, developing and printing with which this case is concerned. In any event, a prior patent or publication needs not to have been reduced to practice, or to be more than a paper proposition, in order to negative patentability in a later patent. It is sufficient if the prior patent embody the elements and disclose the principle of operation of the patent in suit. Walker on Patents, 6th Ed., pages 120-1; see, also, *Pickering* v. *McCullough,* 104 U. S. 310, 319; *Dashiell* v. *Grosvenor,* 162 U. S. 425, 432.

The Court of Appeals said in its opinion (71 Fed. (2d) 153, 154):

> "The problem sought to be solved by the patent was bringing together on one positive film the picture record, which requires one type of development, and a sound record, which requires a different type of development."

How could anyone familiar with the art of composite printing in still and motion picture photography have regarded that as a problem? The patent in suit does not describe the composite printing as a problem. The only difficulties it speaks of are those resulting from differences in exposure of sound and picture negatives, and for those difficulties the solu-

tion of separately taking and separately developing the sound and picture negatives had been fully and completely stated by Bullis, and it had long been practiced in composite printing.

The process of photographing two pictures on separate negatives, separately developing them and then combining them on a single positive by the composite printing process, was first used with still pictures.

When motion pictures arrived, and it was desired to have two sets of motion pictures for projection together, the same process was used and for the same reasons.

As soon as recording sound on film was developed and it was desired to commercialize sound on film with pictures, the same old process was applied, and again for the same reasons. The same advantages, none of which the patentees claimed to have discovered, namely, separate development to obtain good quality in the negatives, and printing on a single positive for convenience in use, were the objectives in all three classes of photographs.

Neither the process nor the reasons for its use were revealed to the industry by these patentees. It is easy to understand why the trial court said:

> "The patentees made no contribution to the art of photography" (R. 1196).

The motion picture industry should not be compelled to pay tribute to this so-called invention, every conception of which was old and the steps of which were obvious to one with any substantial knowledge of the subject.

II.

The Circuit Court of Appeals was wrong in holding that the Wente application created an estoppel or presumption against the petitioner.

As the claim to invention in this patent is so flimsy, one naturally seeks for an explanation of the decision of the Circuit Court of Appeals. Its error in connection with the Wente application for a patent may have been a contributing cause.

Dr. Wente was a research engineer employed by the Western Electric, whose subsidiary is defending the suit for the petitioner (R. 27). In April, 1924, he filed an application for a patent in the United States Patent Office (R. 605). The gist of Wente's invention was the improvement of the quality of the sound record in the upper frequencies by reducing the grain in the emulsion (R. 641, ll. 31-4), and by speeding up the sound record both in the recording and the printing process. When his application was filed it contained, among others, claims broad enough to include the process of the patent in suit. These claims were properly rejected without any protest from Wente and were thereupon withdrawn. Wente testified that he considered his real invention was in connection with the doubling of the speed of recording on the sound film (R. 371), and that was the only thing in his application he considered original (R. 372); that when he gave his memorandum to the patent department of the company, the patent solicitors broadened the claims so that they included a process of recording the sound and pictures on separate negatives, treating them separately in development, and printing them on a single positive. The Wente appli-

cation was offered in evidence by respondent-plaintiff to establish an estoppel or presumption of novelty against the petitioner. Of this incident the Circuit Court of Appeals said (R. 1228):

> "The Western Electric Company's scientist, Dr. Wente, applied for a patent disclosing and claiming the invention of the patent in suit. The application stated that for correct sound reproduction 'it is important that the development of the positive and negative be so carried out that the transmission of the positive is at every point proportional to the exposure of the negative. This is in general not the best condition for the pictures as under these circumstances they will usually be too harsh. In the system here proposed the picture negative and positive can be developed to give the most pleasing results for pictures, and yet the negative of the sound record can be so developed that when it is printed on the picture positive film the required contrast is obtained in the positive sound record.'
>
> "His claim No. 31 was rejected on the patent of these inventors (British Patent No. 178,442) corresponding to the patent in suit and was cancelled. And after that experience, it is now argued, by the Western Electric Company, which is defending this suit, that there is no validity. That company is hardly in a position to question validity of the patent. *DuBois* v. *Kirk*, 158 U. S. 58; *General Knit Fabric Co.* v. *Steber Machine Co.*, 194 Fed. 99 (C. C. A. 2); *Sugar Apparatus* v. *Yaryan*, 43 Fed. 140, 144."

DuBois v. *Kirk*, 158 U. S. 58, cited by the Circuit Court of Appeals, relates to a case where utility, not invention, was in question. The Court there said that where the infringer not only applied for a patent

covering the device in question but actually used it, the presumptions respecting its *utility* were against him.

In *Haughey* v. *Lee*, 151 U. S. 282, 285, this Court said:

> "There is no merit in the proposition made in the second assignment of error, that defendants are estopped from asserting that there is no patentable novelty in plaintiff's invention, by their conduct in seeking to procure, through one of their employes, a patent for substantially the same invention. Whether or not there is any inconsistency in trying, at one time, to get a patent for a supposed invention, and in afterwards alleging, as against a rival successful in obtaining a patent, that there is no novelty in the invention, it certainly cannot be said to constitute an estoppel. Besides, the defence of want of patentable invention in a patent operates not merely to exonerate the defendant, but to relieve the public from an asserted monopoly, and the court cannot be prevented from so declaring by the fact that the defendant had ineffectually sought to secure the monopoly for himself."

Furthermore, the petitioner, Paramount Publix Corporation, has a separate interest, and no estoppel or presumption could arise against it, because of the acts of Western Electric employees.

III.

The contention of the respondent, which was accepted by the Circuit Court of Appeals, that the problem of putting two separately developed negatives on a single positive by a printing process was too much for the research laboratories in this country, and that the solution was revealed by these patentees to the Western Electric Company in 1927 and then appropriated by it, is without any support in the record.

Seeking for further explanation for its decision sustaining this patent, we find an inference in the opinion of the Circuit Court of Appeals prejudicial to the petitioner, which is without any basis in fact.

Prior to 1927 Warner Brothers had commercially produced sound on disc with motion pictures, using Western Electric apparatus furnished under a recording license agreement made in 1926 (R. 334). In December, 1926, Engl, one of the patentees, came from Germany, and early in 1927 in the Fox Studios, made some demonstrations of their sound on film apparatus which Western Electric engineers observed. In 1928 Western Electric commenced commercially to produce its sound on film apparatus. From this bare chronology the respondent asserted in the Circuit Court of Appeals that the failure of the Western Electric Company to produce sound on film apparatus prior to 1927 was due to *its inability to solve the photographic problem covered by this patented process;* that the patentees had revealed to it in 1927 the solution of the problem; and that the Western Electric Company promptly appropriated the process

to its own use. In its brief in the court below the respondent said (p. 44):

> "Here, several years after Vogt and his associates had solved the problem in Germany, the Western Electric engineers were completely stalled in their development and research work by the problems, the solutions of which they now assert were obvious and well known years before."

It then asserted (p. 45):

> "So that nothing was lacking for the recording and reproducing of successful sound-on-film except the knowledge of the Tri-Ergon system which became available in this country in late 1926."

Then follow several pages under the caption, "The Tri-Ergon System Fully Disclosed to Western Electric Engineers in 1926 and 1927". After again stating that the Western Electric Company had failed up to 1926 to bring out sound on film, the respondent said (p. 50):

> "There the matter stood in 1926. And there, so far as Western Electric is concerned, it might have stood today. But at the end of that year Dr. Engl brought his equipment to America; demonstrated it to the research engineers; theatres were equipped with sound-on-film reproducing apparatus beginning in June, 1927 (R., p. 324); the defendant, along with the other Western Electric producer-licensees, adopted the process of the patent in suit and now it is the standard practice of the industry."

These assertions made an impression on the Court of Appeals, which said (R. 1225-6):

> "The problem sought to be solved by the patent was bringing together on one positive film the picture record, which requires one type of development, and a sound record which requires a different type of development. Its accomplishment marked an important advance in the art. Makers of talking motion pictures, including the Western Electric Company and its associates, during the period following the application for this patent tried, but until the inventor exhibited this process, accomplished little with the development of sound on film. While all apparatus necessary to practice the present invention was at hand and owned by the Western Electric Company and its affiliates, no one solved the film problem presented by the requirement of different treatment for sound and picture records. The difference in treatment was necessary to avoid distortions of one or the other or both in reproduction. The engineers of the Western Electric Company, in this period, struggling for the solution of the problem of sound on film development, turned to sound on disc. The first successful talking motion picture in this country was produced by sound on disc. The process of the patent in suit was brought to this country from Germany. Western Electric Company's engineers examined and tested it. They thereupon used it, and it superseded sound on disc."

If the court below had made a careful examination of the record, it never would have accepted these conclusions.

That the Western Electric interests were "stalled" in their efforts to produce sound on film because of

their inability to devise the photographic processes described in the patented process, is without any support in the record.

> First. The assertion that the research laboratories of Western Electric, as well as those of the Eastman Company, which were always available (R. 305), were unable to devise a photographic process or steps by which sound and pictures could be separately recorded and developed, and then printed on a single positive, is unbelievable on its face.

The state of the prior art, as disclosed in the record, makes it unbelievable. Knowing all the advantages of separate negatives, separate development and single positives, the suggestion that the concerns defending this suit could not think of a way of producing a single positive with sound and picture records printed on it from two separate negatives, is absurd.

> Second. The facts connected with the Wente application refute the respondent's contention.

At the trial the plaintiff sought to create an estoppel by proving that Wente in 1924 applied for a patent on a process identical with Vogt's (see pp. 29-35, *supra*). Wente was engaged in research on sound on film apparatus, for Western Electric. The respondent-plaintiff itself proved that at least as early as April, 1924, the Western Electric interests knew all about separate recording, separate development and combining the negatives by printing on a single positive film. In 1924 Wente had never heard of these patentees or their application for patent (R. 323).

In its eagerness to establish an estoppel against the petitioner, the respondent thus overreached itself and annihilated its own claim that the final solu-

tion of sound on film depended on this patented photographic process first revealed to the Western Electric by Engl's visit in 1927. It also destroyed its claim that Western Electric furnished disc apparatus rather than film to Warner Bros. in 1926, because Western was then ignorant of the process of the patent in suit.

This item of evidence offered by the respondent is alone enough to refute its contention that this photographic process was revealed to the Western Electric by Engl in 1927, and that the revelation enabled the Western Electric Company promptly to produce sound on film.

> Third. There is abundant other evidence that the manufacture by the Western Electric Company of apparatus for the disc system, instead of film, for the first commercial output of sound pictures was due to other reasons than difficulty with the simple photographic process described in the Vogt patent.

Prior to 1926 motion pictures were silent. There was no demand for sound pictures, nor was there convincing evidence that the public would like them, prior to Warner Brothers exhibition of sound pictures with the disc system beginning in August, 1926. The Western Electric commenced work on sound on film in 1913, and continued it until 1927 and since. The real problems related to methods of recording and reproducing sound. The use of a single positive had no relation to improvement in quality but only convenience in use. Other departments of the Western Electric meanwhile were working on the disc system. Western Electric electrically recorded disc records for phonographs had been developed and were in commercial use (R. 313-4). When the possibility of

sound pictures was first seriously considered, all the methods and apparatus for recording and producing sound by the disc method were developed and ready at hand. The addition of sound on disc to motion pictures involved merely the attachment of a phonographic type of turntable to existing motion picture projectors, with no modification of the projectors or of film printing machines. It involved no change in the size of the picture to make room for the sound record. The sound on film form, on the other hand, involved new recording equipment, new recording technique, newly developed recording apparatus and changes in thousands of projectors in theatres. It was natural, when Warner Brothers were willing to experiment with sound pictures, that the disc system was furnished them (R. 99, 314). In the summer of 1926, public interest in sound pictures was disclosed, and a number of theatres were equipped with the Western Electric disc system to make use of the pictures Warner had made with it. From that time the silent picture industry was forced by public demand to move toward the adoption of sound.

Meanwhile, Western Electric had continued its work on both disc and film systems. Wente had worked on the variable density method of recording sound on film in 1920 (R. 312-3); he devised the Western Electric light valve (R. 313, 319); described on pp. 3-4, *supra*. Others, including Fox Case, had used the glow lamp for recording sound. Wente's research work on light valves had advanced by 1923 to the point where he thought it could be satisfactorily used, but work on it continued. The apparatus development department of the Western Electric had been working on it up to 1927. Drake, of Western Electric, said the light valve apparatus was not in commercial

form until December, 1926 (R. 338). Respondent's testimony was to the effect that the contest between the glow lamp and light valve had continued until late in 1926 (R. 417). The first light valve installation was in 1927 (R. 340). Wente had also been working on improvements in the photoelectric cell, an essential part of the apparatus for reproducing sound from the film record (R. 380). Some other real problems were devising suitable emulsions for sound negatives (R. 145-6, 152); mixing sound taken from two points, and increasing the frequency range of loud speakers (R. 317). The testimony for the respondent was to the effect that the Fox Case film system was better than Engl's demonstration in 1927 (R. 330). The Fox Case Company in 1926 had been developing sound on film by a method of its own, using the single film system throughout (R. 300).

The Western Electric was in a position to put out sound on film in December, 1926, "if there had been a demand for it" (R. 338). In 1927 when Fox Case sound on film pictures were ready for exhibition, Western Electric equipped certain Fox Theatres with apparatus for reproducing the sound. In 1928 when the other large producers of motion pictures, decided to adopt the film system, Western Electric supplied the apparatus.

That the Western Electric had not commercialized all its sound on film apparatus prior to 1926 may be true, but it was due to wholly different causes than inability to find a way to combine two separately developed sound and picture negatives by a printing process on a single positive.

The contention of the respondent, accepted by the Circuit Court of Appeals, that the conception of combining the two separately developed negatives on a single positive by a photographic printing process,

was the stumbling block which delayed Western Electric sound on film apparatus, is utterly unsupported by the evidence.

IV.

Claims 8 and 9, which omit separate development, in addition to being invalid for the foregoing reasons, are invalid as being for a broader alleged invention than that disclosed in the application as filed, and clearly anticipated.

The Circuit Court of Appeals disregarded this point. Claim 5 was taken as typical of all the claims.

Claims 8 and 9 omit, in terms, the separate development of the two negatives in a manner appropriate for each. The original application, filed in March, 1922 (R. 475), contained no suggestion that the separate development step might be omitted. Indeed, separate development was the purpose of the process. Nine years later, in July, 1931, the specification was broadened (R. 540, 542), by inserting the matter now appearing in lines 83 to 89 of the patent (R. 468) and inserting new claims including 8 and 9. Considerably before this the process had been used commercially by petitioner and other motion picture producers (R. 196).

The alleged invention, emasculated by omitting separate development in claims 8 and 9 was squarely anticipated by Greensfelder and the composite printing process. Furthermore the courts regard with disfavor any attempts to enlarge the scope of an application once filed. *Railway Co.* v. *Sayles,* 97 U. S. 554; *DeForest Radio Co.* v. *General Electric Co.,* 283 U. S. 664, 675; *Powers-Kennedy Co.* v. *Concrete Co.,* 282 U. S. 175, 178.

Assigned Error No. 6.

This deals with the effect of a disclaimer filed after this suit was begun (R. 472). As it relates only to claims 6 and 7, and a similar question will be argued in Nos. 255-6, we leave the point to abide the conclusion in the other case.

CONCLUSION

Facts that are beyond dispute refute the patentees' claim of novelty and invention. The decisions of this Court, while always protecting the rights of patentees where any real exercise of inventive faculty is disclosed, have been careful to prevent the imposition of a patent monopoly on the public where it is absent. All these patentees did was to scramble together simple and well-known photographic processes, and dress the aggregation up as the invention of a process. Clearly, they made no contribution entitling them to exact a tribute from an entire industry the success of which with sound on film pictures has been due to research and developments in phases of the subject, with which this patent has nothing to do.

The judgment should be reversed.

Respectfully submitted,

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APPENDIX.

HISTORY OF PATENT NO. 1,825,598, ISSUED SEPTEMBER 29, 1931, ON THE APPLICATION, FILED MARCH 29, 1922, OF VOGT, MASSOLLE AND ENGL.

The history of the long prosecution of the application for this patent in the Patent Office is reviewed by the trial court (R. 1188-1195). It shows how the question of patentability of the claims over the prior art became obscured by an interference proceeding invited by the applicants, and invention taken for granted at the end when the claims in suit were submitted more than nine years after the filing date.

The original application was filed March 29, 1922 (R. 475), with four claims (R. 480), not unlike the claims in suit. These were erased November 24, 1922, and one claim substituted (R. 484). This claim was for an "improved process for the production of combined sound and picture records, in which the sound record and the picture record are produced simultaneously on a single film which is then divided and the two parts developed separately, and afterwards reunited and used to print the single positive record".

On April 19, 1923 (R. 486) this claim was rejected "as not involving invention over Bullis of record". On October 11, 1923 (R. 487), the applicant then substituted two new claims. On October 15, 1923, these claims were rejected (R. 489).

Nothing further was done for nearly a year, when new solicitors were employed (R. 490) and the old claims were cancelled and two new claims substituted on September 29, 1924 (R. 491). These were rejected January 26, 1925 (R. 498), the Examiner citing the Greensfelder and the British Massolle patent.

On April 2, 1925, the two rejected claims were modified and two, numbered 3 and 4, were added (R. 499). *The two additional claims, 3 and 4, were copied from DeForest patent No. 1,489,314,* April 8, 1924 (R. 528). In the memorandum accompanying these additional claims the applicants referred to the DeForest patent and called attention to the fact that they had copied claims 3 and 4 from it, and said, "An interference with the said patent at an early date is requested" (R. 501). On April 6, 1925 (R. 502), claims 1 and 2 were rejected by the Examiner "on Craig 1,260,337, in view of Greensfelder, 1,254,684, both of record. It is shown to be old in Craig to take separate synchronous sound and picture records simultaneously, and then reproduce these two records on a single record strip. Applicant desires to reprint both records on one side only, but this is the teaching of Greensfelder, note page 3, line 128, to page 4, line 8."

At the same time the Examiner rejected claims 3 and 4 copied from DeForest "as not based on the disclosure of applicant" (R. 502).

On April 17, 1925 (R. 504), the applicants re-wrote claims 1 and 2, and asked reconsideration of claims 3 and 4.

On April 27, 1925 (R. 513), the Examiner again rejected claim 1 on Craig and Greensfelder. He rejected claims 3 and 4 again as having no basis in the applicant's disclosure. He said, "Claim 2 is allowed as at present advised."

The applicant, on May 23, 1925, took an appeal to the Examiners in Chief (R. 514). It will be noted that when the case came up to the Examiners in Chief on appeal, all claims except one (then numbered Claim 2) had been rejected by the Examiner, and that one was limited to the making of sound and action exposures on a single negative which was after-

wards split apart for separate development, a claim which would not be infringed by the commercial process of the petitioner.

The Examiners in Chief held that the applicant had a right under his original disclosure to make Claims 3 and 4, copied from DeForest, and declared an interference with DeForest. It is a settled rule in the Patent Office that claims copied from another patent are conclusively presumed to be patentable until after priority has been decided. On this appeal, therefore, the Examiners in Chief had no question of novelty respecting Claims 3 and 4, and they must have been influenced by that fact in allowing Claim 1, which was a narrower claim than had been previously allowed to DeForest. Even then they said:

> "While the disclosure in these patents may tend toward a possibility of doubt as to invention being involved in the process defined by claim 1, the grant of the patent to DeForest and the lack of clear anticipation in either of the references or in their combination as to the addition or substitution of features in one not shown in the other and involving the question of invention vs. mechanical skill, we are of the opinion that claim 1 should be allowed in the absence of more pertinent and anticipatory art and appellants allowed to be placed in interference with DeForest to determine the question of priority" (R. 531).

The two references referred to were Craig and Greensfelder. Bullis seems to have been forgotten.

After the rejection of April 19, 1923 (R. 486), Bullis was never mentioned again in the proceedings. The Examiners evidently had before them none of the other patents referred to now, or any other refer-

ences or disclosure as to prior practices respecting composite printing.

After the decision of the Examiners in Chief in 1925, declaring an interference with DeForest, the case went into an interference proceeding, lasting five years, which reached the Court of Appeals of the District of Columbia, where DeForest finally conceded priority. The interference proceeding ended in May, 1931. Thereupon, on July 15, 1931 (R. 538), the applicants amended their specifications, claims 1 and 2, and inserted new claims, 5 to 11, inclusive, all of which were promptly allowed *the next day* (R. 547).

After the interference proceeding, it was the duty of the Examiner to re-examine the question of patentability, not only as to the newly added claims, but as to those which had been involved in interference. It was obvious that nothing of this kind was done. The circumstances under which the interference was declared were such as to put the question of patentability over the prior art in almost total eclipse, and the question was never revived. Rewriting the claims and adding new ones in July, 1931, gave the applicant the opportunity to draw them nicely to avoid literal identity with prior patents and take advantage of the commercial practice which in the meantime had grown up as a result of the advent of commercial talking motion pictures.

DRAWING TAKEN FROM RIES PATENT (R. 592) SHOWING POSITIVE FILM WITH PICTURES AND SOUND RECORD SIDE BY SIDE

Fig. 4.

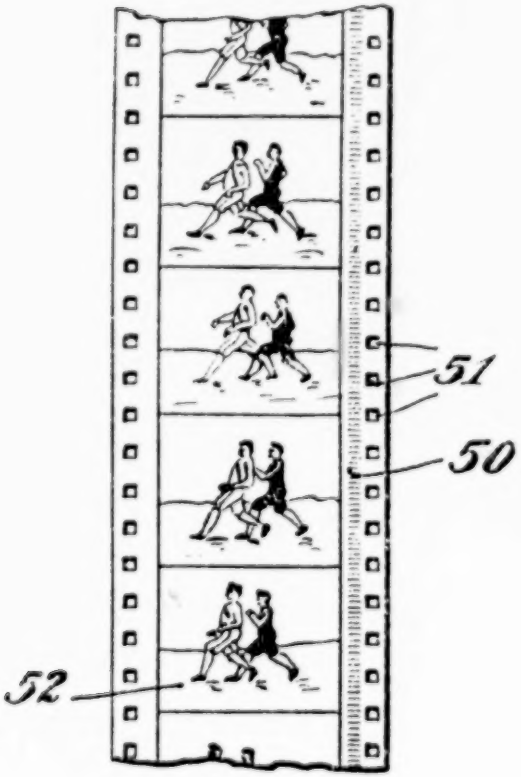
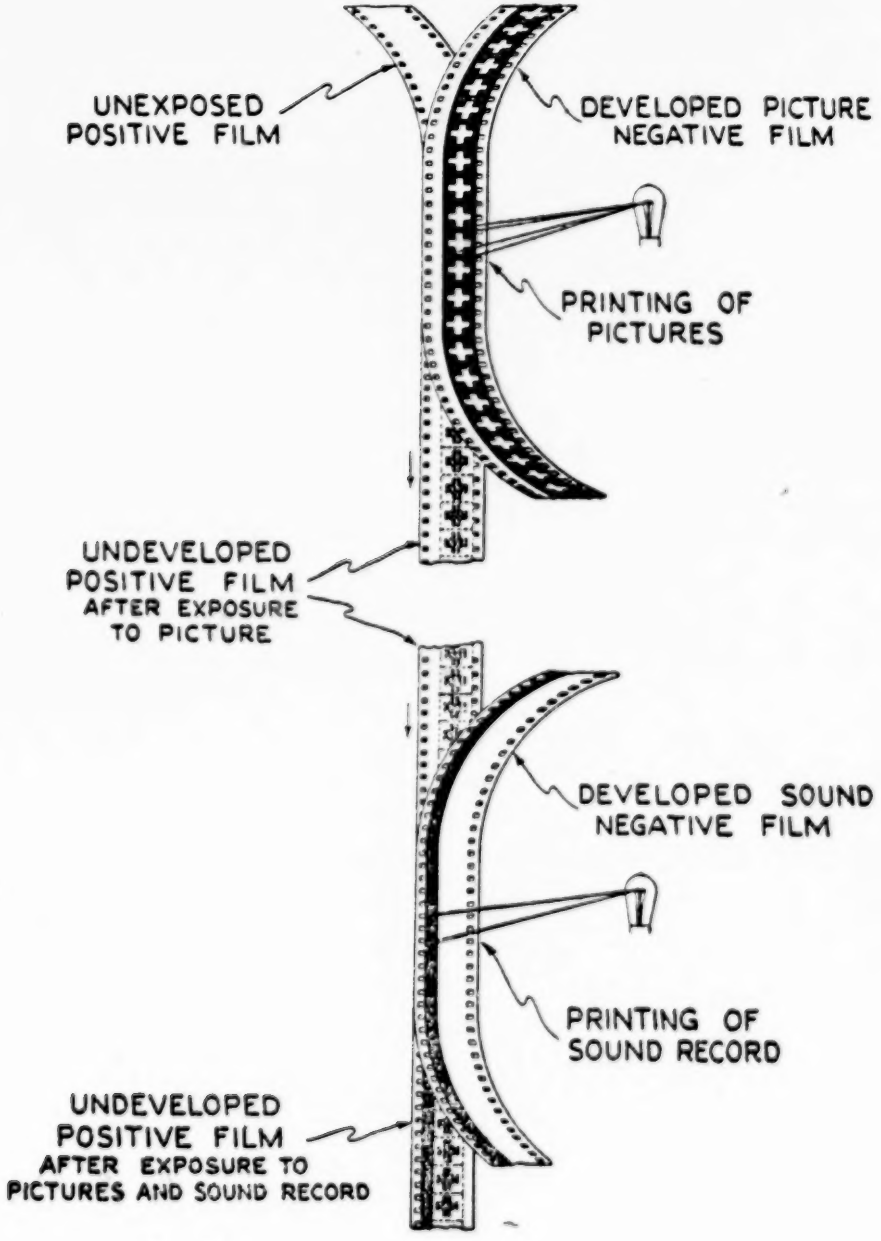
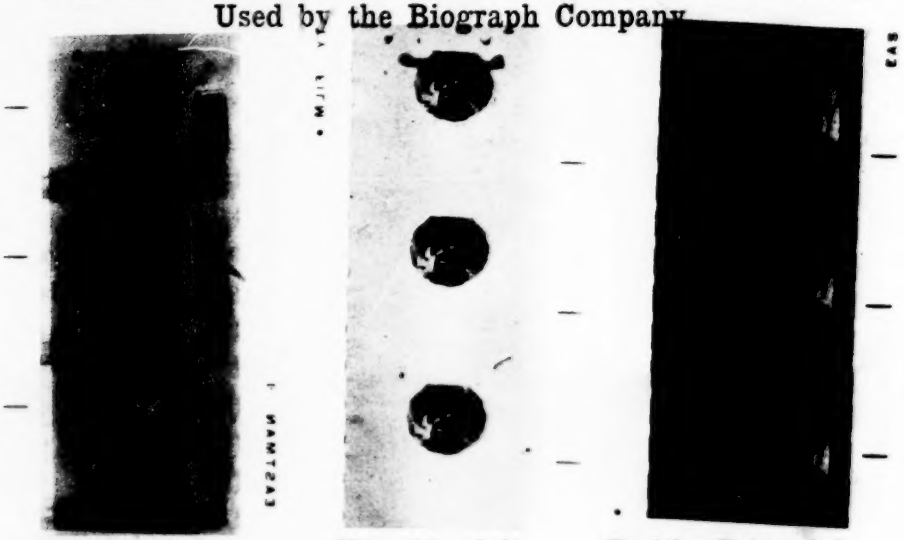


CHART SHOWING SUCCESSIVE PRINTING OF PICTURE AND SOUND NEGATIVES ON SINGLE POSITIVE FILM


UNEXPOSED POSITIVE FILM
DEVELOPED PICTURE NEGATIVE FILM
PRINTING OF PICTURES
UNDEVELOPED POSITIVE FILM AFTER EXPOSURE TO PICTURE
DEVELOPED SOUND NEGATIVE FILM
PRINTING OF SOUND RECORD
UNDEVELOPED POSITIVE FILM AFTER EXPOSURE TO PICTURES AND SOUND RECORD

Petitioner's Exhibits A and C Illustrating the Process Used by the Biograph Company

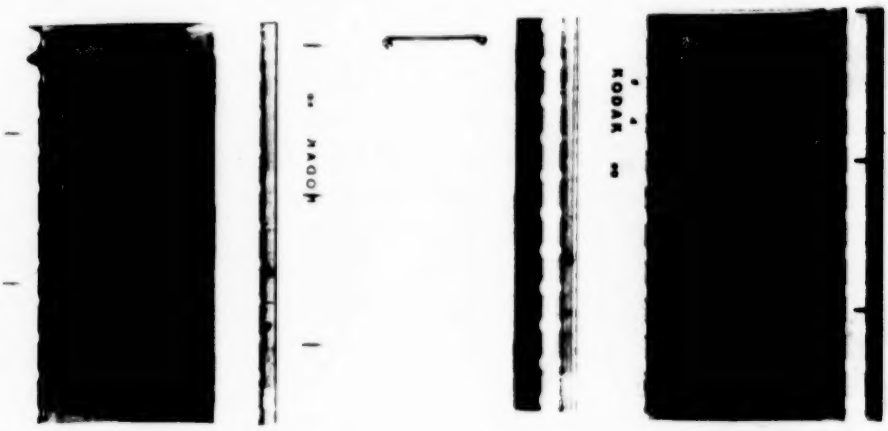


Negative of the "Master"

Negative of the "Master's Dream"

Positive Print of the Two Negatives

Plaintiff's Exhibit 12-A Illustrating the Patented Process and Also Petitioner's Process



Negative of the Action

Negative of the Sound

Positive Print of the Two Negatives